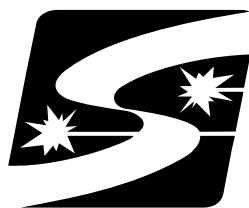


WARMING CABINETS

**MODELS SS2201-J2
THROUGH SS2207-J2**



SKYTRON[®]

OWNER'S MANUAL

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TRANSPORT AND STORAGE REQUIREMENTS

- Ambient temperature range: -40° to +159°F (-40° to +70°C)
- Relative humidity range of 10% to 100% including condensation.
- Atmospheric pressure range of 50KPa to 106KPa

ELECTRICAL INFORMATION

	SS2201-J2(G)	SS2205-J2(G)	SS2207-J2(G)
Electrical	120V, 50/60Hz,1PH	120V, 50/60Hz,1PH	120V, 50/60Hz,1PH
Amp Rating	2.0 Amps	6.5 Amps	8.8 Amps
Power Usage	240 Watts	720 Watts	1056 Watts

This manual has four main sections, each developed for a certain reader.

- 1. General Description:** For all readers
- 2. Operation:** For staff who use the warming cabinets
- 3. Service:** For authorized SKYTRON trained personnel
- 4. Installation Instructions:** For contractors and authorized SKYTRON service personnel who install warming cabinets. (Refer to section 1-2.)

Model Identification

The data tag can be found on each warmer inside the uppermost compartment on the left hand side closest to the door. Record your Model Number and Serial Number below. For prompt service, please have your model and serial number ready when contacting SKYTRON for assistance.

Model # _____

Serial # _____

Although current at the time of publication, SKYTRON'S policy of continuous development makes this manual subject to change without notice.

PRODUCT SAFETY LABELS

1



2

SKYTRON
 1-800-759-8766
 Manufactured by JAMESTOWN METAL PRODUCTS, INC.

MODEL		SER. NO.	
CYCLES		VOLTAGE	
MAX. KWS.		MAX. AMPS	
PHASE		EQUIP. NO.	

3

F2-012-81

BLANKET WARMER-SAFE OPERATING INSTRUCTIONS

- 1-ALWAYS DISCONNECT POWER WHEN SERVICING THIS DEVICE TO ELIMINATE RISK OF ELECTRIC SHOCK!
- 2-Refer to the Operating Manual provided prior to using this device, or anytime you have a question about safe operation.
- 3-Refer to the General Set-up Instructions provided by the Manufacturer when installing this device.
- 4-Employ safe blanket loading practices and ensure that no blankets are in contact with the rear surface of the warmer.
- 5-Do not stack blankets closer than 4" from fan inlet.
- 6-Do not allow stacked blankets to extend past front lip of shelves to ensure airflow within the cabinet is not restricted.
- 7-Care should always be taken to ensure the door is closed and latched upon loading or retrieving contents from the cabinet.
- 8-Use warm water and a mild liquid detergent to remove finger prints and light soil from the stainless steel surfaces.

4

CAUTION
 To reduce the risk of electric shock, do not remove cover. Refer servicing to qualified service personnel.

5

F2-012-82



6

CAUTION
 Appliance must be located a minimum of 6 feet from patient.

7

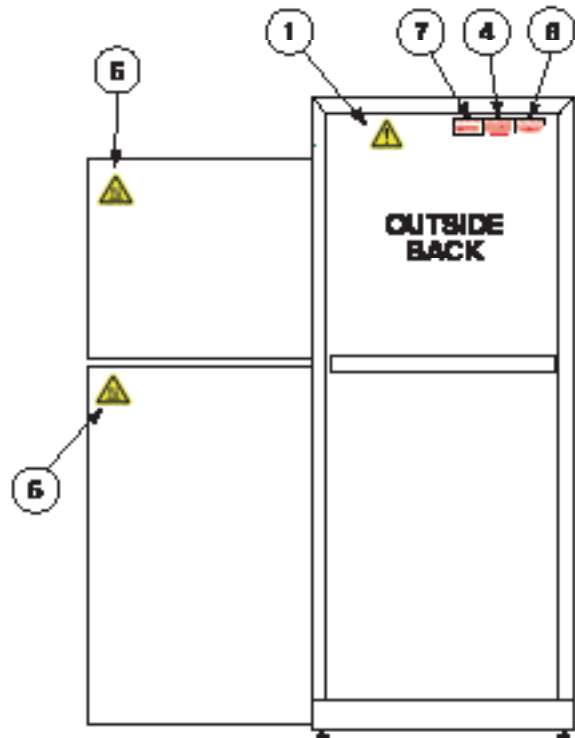
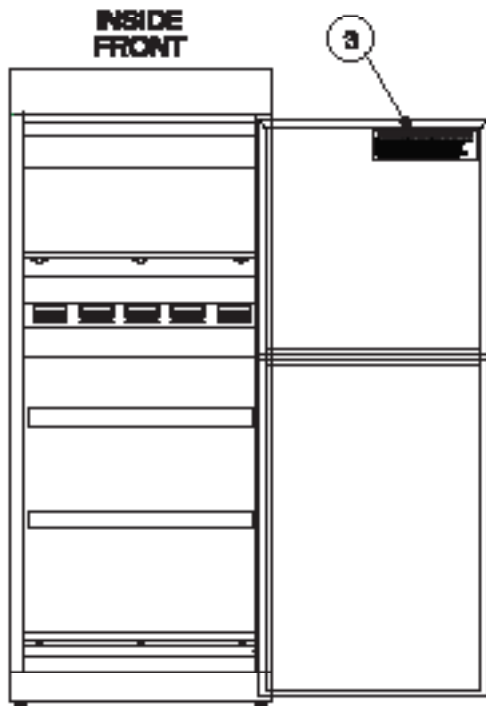
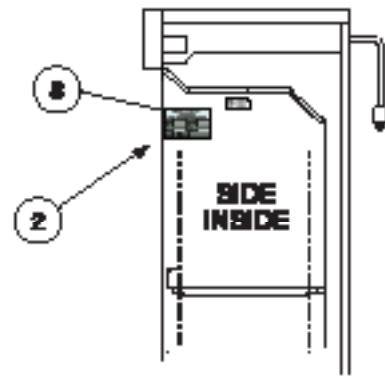
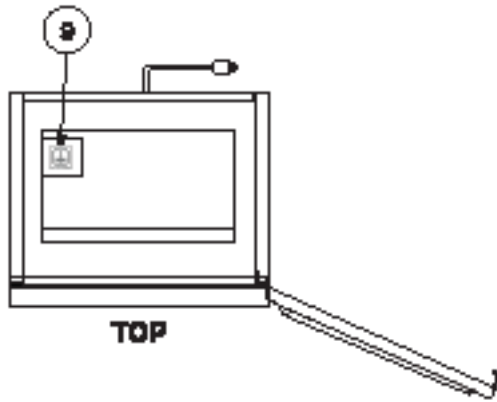
DANGER
 Risk of explosion if used in the presence of flammable anesthetics.

8

ETL LISTED
 CONFORMS TO
 UL STD 61010-1
 64794
 CERTIFIED TO
 CAN/CSA STD C22.2 NO. 61010-1

9





Technical Data

• Dimensions - Inches (millimeter)

	SS2201- J2(G)	SS2205- J2(G)	SS2207- J2(G)
Exterior			
Width	30(762)	30(762)	30(762)
Height	26(660)	74(1880)	74(1880)
Depth	26(660)	26(660)	26(660)
Interior			Upper
Width	27(686)	27(686)	27(686)
Height	15(381)	59(1499)	15(381)
Depth	19(483)	19(483)	19(483)
			Lower
Width			27(686)
Height			35¼(895)
Depth			19(483)

• Capacity

Cubic capacity (Liter capacity)

	SS2201- J2(G)	SS2205- J2(G)	SS2207- J2(G)
Total Volume	4.37 ft ³ (124)	17.5 ft ³ (496)	15.72 ft ³ (445)
Upper Chamber	N/A	N/A	4.37 ft ³ (124 L)
Lower Chamber	N/A	N/A	11.35 ft ³ (321)

• Weight

	SS2201- J2(G)	SS2205- J2(G)	SS2207- J2(G)
Weight	179	340	404

SPECIAL USER ATTENTION

Knowledge of proper procedures is essential to the safe operation of this equipment.

The following precautions should be reviewed by all personnel prior to operating this equipment.



WARNING



Indicates a possibility of personal injury.



CAUTION



Indicates a possibility of damage to equipment.

NOTE

Indicates important facts or helpful hints.



WARNING



Patient Burn Hazard
Temperature of cabinet contents may differ from display temperature.



WARNING



The temperature of liquids in this cabinet may not be suitable for certain patient applications.
Always check the temperature of contents before using.



WARNING



Disconnect (power) supply before servicing.



WARNING



Explosion Hazard
Do not use in the presence of flammable Anesthetics.

NOTE

This warmer should not be left unattended for periods greater than 24 hours. In case of extended absences disconnect warmer from its power source.

NOTE

To promote a self closing door swing, the front door hinge corner leveling foot should be slightly higher than the others.

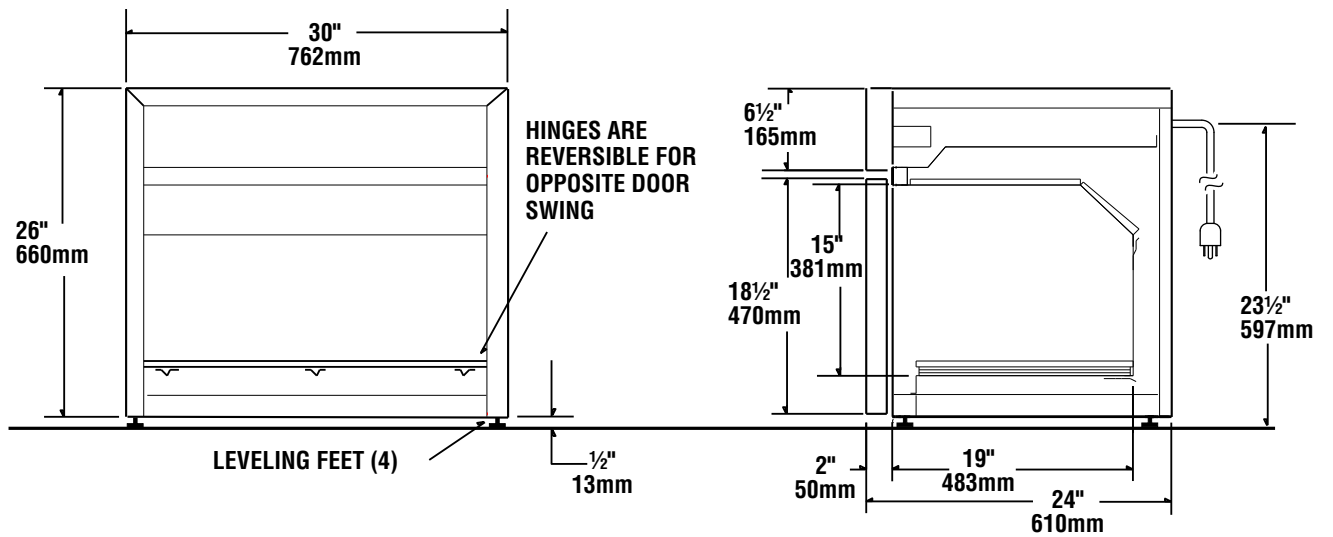
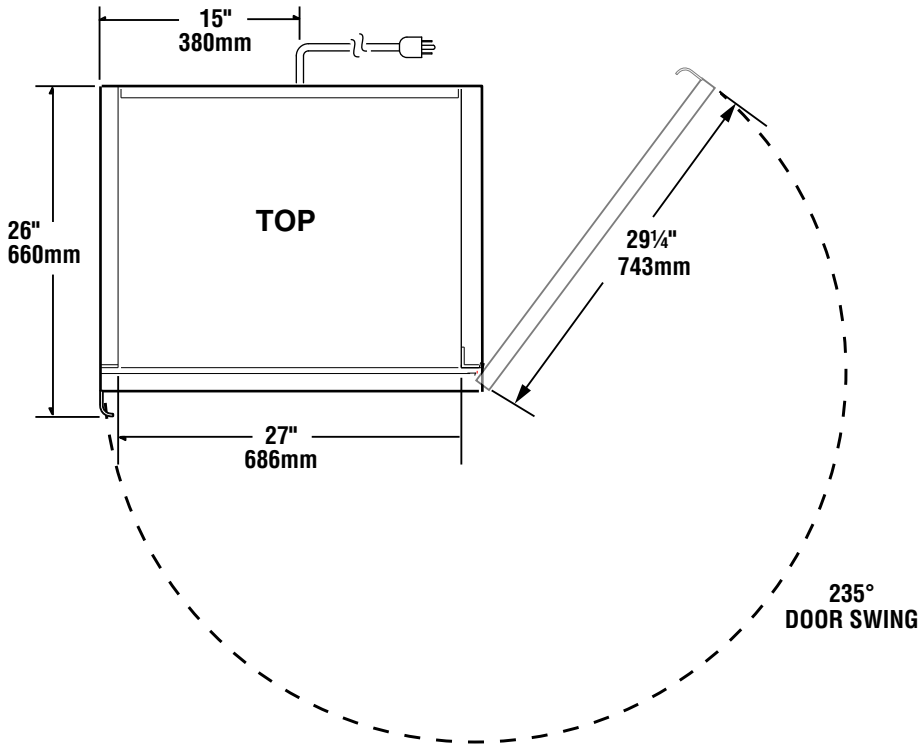
NOTE

To insure proper heat distribution, allow air flow space on the top and door side of blankets. **DO NOT BLOCK AIR VENT.**

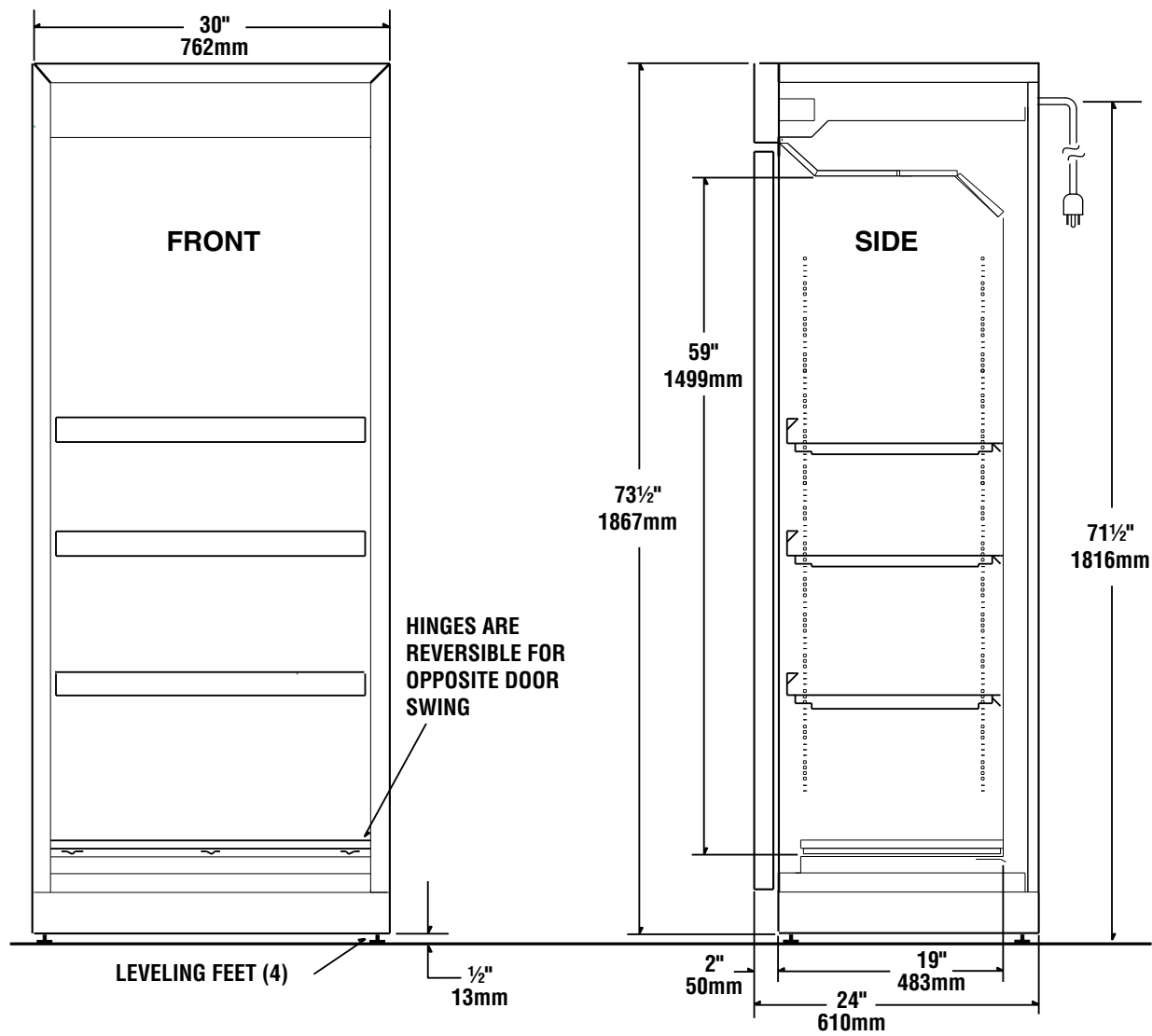
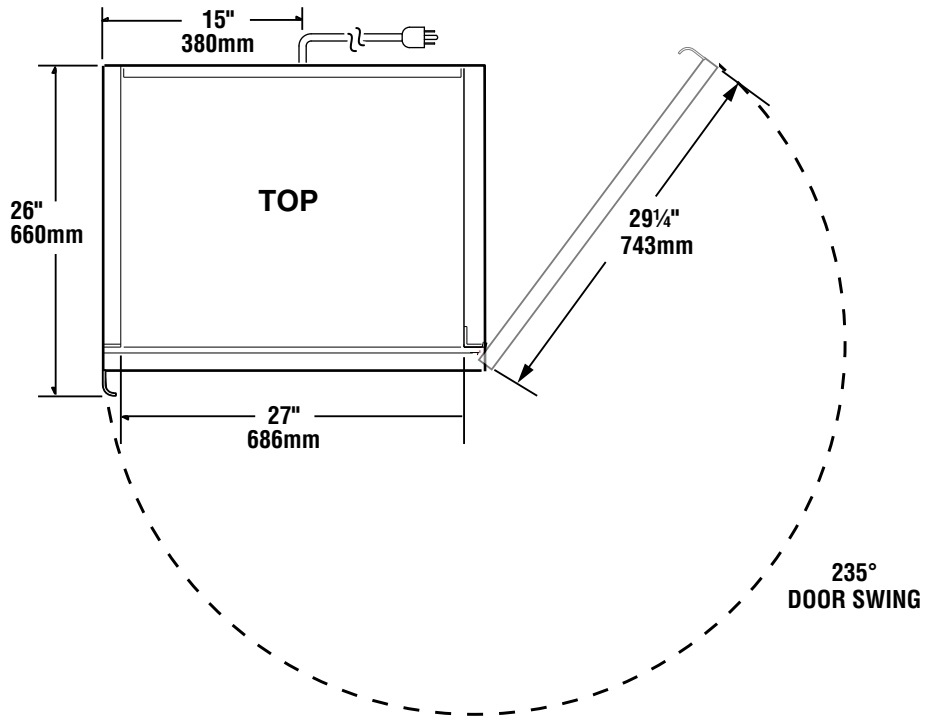
NOTE

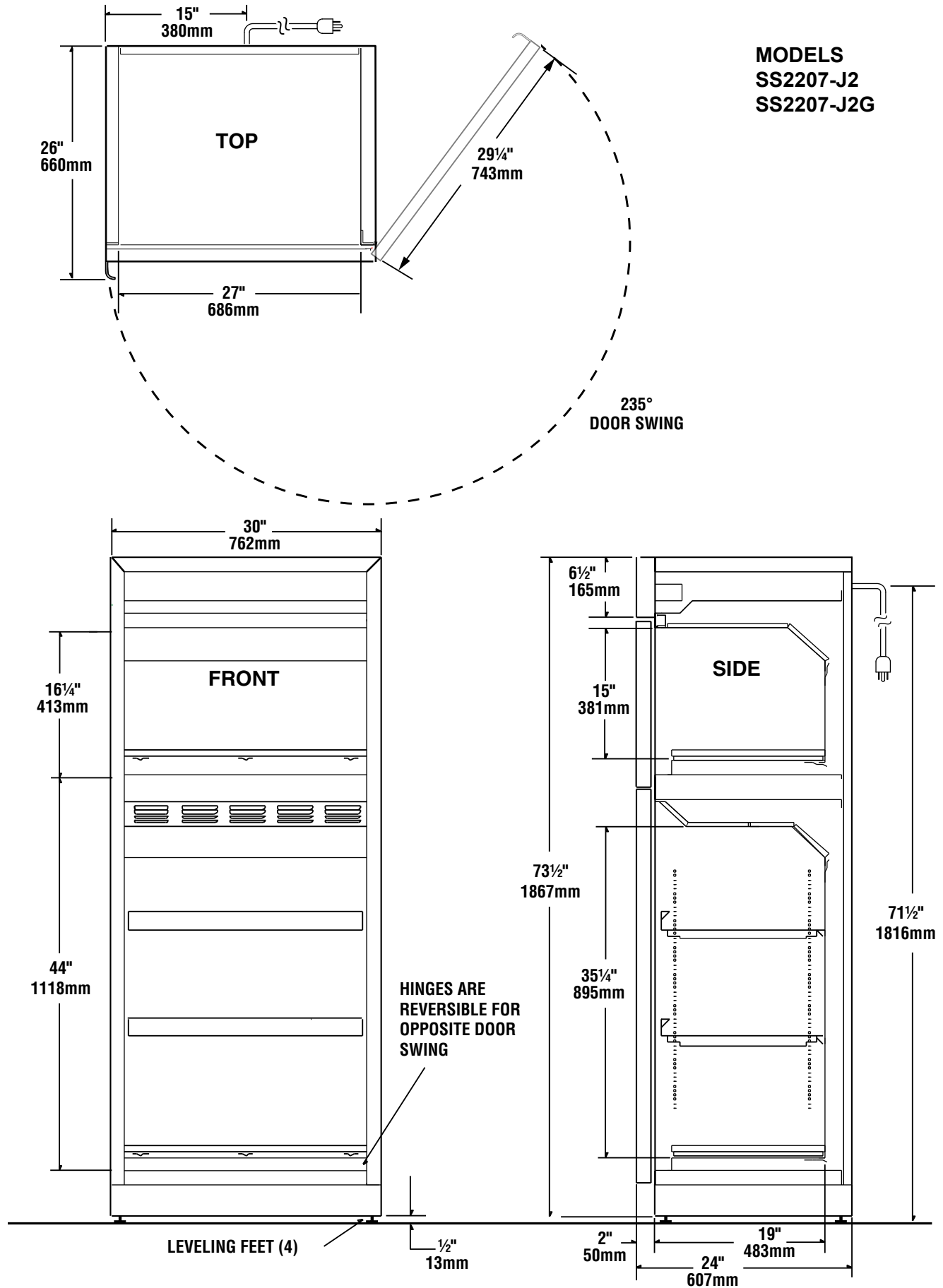
Avoid using flammable cabinet cleaning agents, as well as blanket cleaning agents that cause fabric to become brittle over time.

MODELS
SS2201-J2
SS2201-J2G



**MODELS
SS2205-J2
SS2205-J2G**





1-1. General

SKYTRON Stainless Blanket and Solution Warming Cabinets are designed to provide heated storage of blankets, sterile water and saline solutions used in the care of patients in surgery, recovery, OB/GYN, ICU, ER and trauma areas. SKYTRON Model SS2201-J2(G) offers a compact size with one warming compartment. Model SS2205-J2(G) offers a full size cabinet with one warming compartment. Model SS2207-J2(G) provides upper and lower compartments.

a. Controls

The controls for each compartment are mounted in the top section of the warmer and labeled Upper Chamber and Lower Chamber, with a circuit breaker providing power to each control.

Each compartment controller:

- Controls on/off of the compartment
- Set point of temperature 90° to 160°
- Temperature display in Fahrenheit

Digital read out provides:

- Chamber temperature
- Temperature set point
- Heating active
- Over heat (alarm)
 - An audible and visual AL alarm indicates an overheat condition.
- Loss of power

b. Performance

Heated air is circulated over the contents by fan(s) in a convection function providing an even heat distribution. Each compartment is designed to hold a quantity of blankets or solutions. Once a set temperature is selected and obtained it will be controlled throughout within 10° of the selected temperature. From a cold start, each compartment's loaded contents will be evenly heated to set point within 8 to 12 hours. In the event of power loss the warmer will resume normal function once power is restored.

c. Usage

This device is intended for warming 100% cotton blankets ONLY and non-flammable solutions in commercial establishments where all operators/

users are in-serviced with the use, limitations and hazards. No other use is authorized or recommended.

d. Construction

The body of the warming cabinet is double walled stainless steel construction with insulation for increased heating efficiency. Doors are made of double paned stainless steel or double paned tempered glass framed with stainless steel.

e. Servicing

All control components are located in the control compartment at the top of the warmer and serviced by removal of the front panel. Servicing of circulation fans, heating elements and manual temperature overloads are accessed through the interior of each heating chamber with the door(s) open only by SKYTRON Authorized Service Technicians.

f. Features

- Illuminated power on/off switch
- Insulated body and door(s)
- Silicone door gasket(s)
- Independent digital thermostatic controls and displays
- Reversible door swing
- Front access serviceability
- Leveling feet
- Exterior/interior stainless steel construction
- 8' power cord
- Adjustable shelves for SS2205 and SS2207 models
- Temperature range of 90° to 160°

g. Installation

SS2201-J2(G) – counter, under counter, or cart
 SS2205-J2(G) & SS2207-J2(G) – freestanding

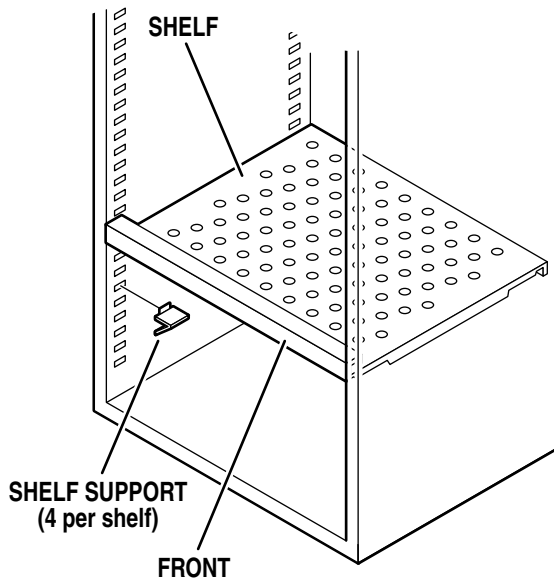
h. Options

- Glass doors (G) on end of model number
- Casters kits
 - SS2201-J2(G) – F2-012-58
 - SS2205-J2(G) or SS2207-J2(G) – F1-010-102
- Warmer cart (F1-020-23) for counter top models
- Warmer stand (F1-020-23-NC) for counter top models

1-2. Installation / Uncrating

Move the warming cabinet to the location of installation prior to uncrating.

- a. Remove metal banding securing the cabinet to the pallet.
- b. Remove all packing materials covering the warmer.
- c. Remove the warmer from the pallet and position in desired location.
- d. Open the door(s) and remove the shipping brackets and replace the screws in the body of the cabinet.
- e. Remove the shipping brackets holding the shelves in the bottom compartment and discard.
- f. Install shelf supports as outlined in the Shelf Adjustment portion of the Operation Section.



- g. Make sure the cabinet is leveled properly to the floor or counter top by adjusting the leveling feet at the bottom of the cabinet. To promote self closing door swing, the front door hinge corner leveling foot should be slightly higher than the others.

- h. Clean all exterior and interior surfaces of the warming cabinet as needed with a damp towel and a mild non-abrasive detergent. Rub surfaces in a back and forth motion in the direction of the grain, do not wipe in a circular motion or perpendicular to the grain.
- i. Plug the power cord into a properly grounded 120V electrical outlet.

1-3. Service / Principles of Operation

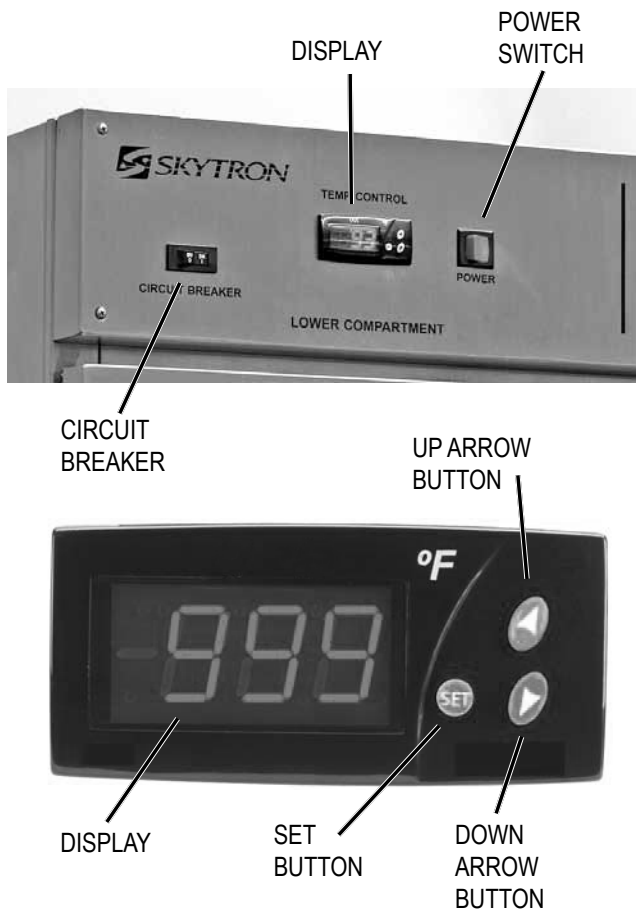
This equipment contains no user serviceable parts. To avoid injury, refer all repairs to SKYTRON trained service personnel.

Model SS2201-J2(G) is a single compartment 1/3 size, SS2205-J2(G) is a single compartment full size, and model SS2207-J2(G) is a dual compartment full size warmer. Each compartment has independently controlled temperature regulation by a thermostatic control unit and independent thermal protection cut off.

Each warming compartment is designed to circulate air from the top of the chamber over a heating source, which cycles on and off by means of a sensor to maintain set temperature, and back out at the bottom of the chamber. This process produces a convection type of heating system.

Dual compartment warmers have an air barrier between the upper and lower compartments restricting heat migration to the upper chamber and affecting the temperature setting.

Control Layout



Description of controls

Each temperature controller and power switch operates one warming compartment.

Circuit Breaker – main power to the warming cabinet controllers.

Power Switch – turns on/off the fan, controller and heating functions of the selected compartment.

Display – normally shows the current interior chamber temperature.

Up Arrow Button – used to adjust the set point of the selected chamber.

Down Arrow Button – used to adjust the set point of the selected chamber.

Set Button - when pressed displays the selected warming chambers desired set point.

Display Messages

ERROR CODE	DESCRIPTION
ER	Memory Error
--	Short-Circuit Probe Error
oo	Open Probe Error

Initial Operation

Initial power up

- Plug the power cord into a properly grounded 120VAC electrical outlet.
- Turn circuit breaker on the front control panel to the **ON** position.
- Turn the power switch to the **ON** position for each compartment.
- The display should illuminate with the current chamber temperature.

Alarm Test

- Press the **SET** button on the temperature control. SP will appear on the display.
- Press the **SET** button again. The present temperature setting will appear on the display.
- Using the Up/Down arrow buttons, set the new set point to 110° and press **SET** to lock the new value.
- Allow stabilization of the heating chamber.
- Repeat steps one and two above and press the down button to 95° and press the **SET** button.
 - The alarm activates
- To silence the alarm, press the **SET** button and the **DOWN** arrow key together.

Operating Instructions

Turning the warmer on

- a. Make sure the power cord is plugged into a properly grounded 120VAC electrical outlet.
- b. Turn circuit breaker on the front control panel to the **ON** position.
- c. Turn the power switch to the **ON** position for each compartment.

The display should illuminate with the current chamber temperature.

Selecting the temperature set point

- a. Press the **SET** button on the temperature control. SP will appear on the display.
- b. Press the **SET** button again. The present temperature setting will appear on the display.
- c. Using the Up/Down arrow buttons, set the new set point to the desired temperature and press **SET** to lock the new value.
- d. Press **SET** and **DOWN** simultaneously to return back to normal operation.

Note: if the set point is changed to a value 10° below current temperature the alarm will activate.

Loading of the cabinet

Load only sterile water, saline solutions or 100% cotton blankets, do not warm synthetic blend fabrics or items containing plastic, rubber, or metal snaps, studs, hooks etc. Check for proper placement of the shelf on shelf supports prior to loading. The blanket shelf is perforated to facilitate even heating of blankets placed on the shelf and must be used to hold blankets.

All loads should be allowed time to stabilize at the set temperature; Do not raise set temperature to increase the rate of heating:

- Solutions - Approximately 8 to 12 hours
- Blankets - Approximately 6 to 8 hours

Bottles should be loaded to allow for a minimum of one half inch from the top of the compartment and spacing around the back and sides one quarter inch and not protrude past the front edge of the fluid tray in the compartment for evenly distributed heating.

For efficiency purposes bagged solutions should be placed on shelves, stacking of fluid bags increases the heating time required to achieve set temperature.

Blankets must be folded and stacked to allow a two to three inch open space between the top of the compartment or shelf, on each side and rear of the stacked blankets, nor protrude past the front edge of the shelf. Following the above guidelines improves the efficiency of heating the contents thoroughly.

Rotate warmed contents on a first in first out basis failure to do so may present cold or discolored contents.

Temperature settings for fluids vary depending on use or manufacturer. Always refer to AORN guidelines and manufacturer's recommendations for proper temperature settings.

Flammable agents in the warming cabinet can cause an explosion or fire. Do not load the warming cabinet with any item that could introduce flammable agents into the cabinet atmosphere.

In case of power failure the unit will resume normal operation when power is restored. Follow the fluid manufacturer's guidelines for solutions that have cooled or been removed from heated storage but not used.

Unloading of the cabinet

Internal surfaces of the warmer are hot. Avoid contact when loading and unloading the warming cabinet.



CAUTION



Glass may shatter when cooled suddenly, solution bag and bottles may burst when picked up.



CAUTION



Temperatures over 110° may burn when exposed for extended periods of time.

Skytron recommends the use of personal protective equipment while loading and unloading of contents.

Turning the warmer off

- Move the on/off rocker switch(es) to the **OFF** position of the compartment to shut down.
- Moving the circuit breaker switch to the **OFF** position will shut down the entire warmer

Overheat Alarm (A1) Condition

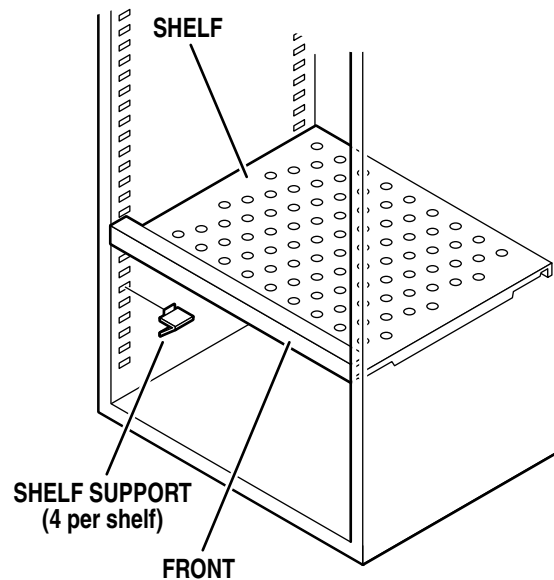
When the chamber temperature exceed the set point by 8° or more the display will read **A1** and the audible alarm is triggered.

- To silence the audible alarm press and hold the **SET** and **DOWN** buttons together until silenced.
- Turn off the warmer chamber and unload the contents and reload following the loading guidelines previously outlined.
- Turn on the chamber and monitor for performance. If the chamber overheats into an alarm (**A1**) condition turn off the chamber and contact your local authorized service personnel for troubleshooting.

If lowering the set temperature of the chamber more than 10° of current internal temperature the alarm will activate. Follow the procedure above to silence the alarm.

Shelf Adjustment

- Turn off the power to the heating chamber where the adjustment is needed.
- Allow the chamber to cool and unload the contents.
- Remove the shelf
- Determine the new position of the shelf
- To remove the shelf supports pull the bottom of the support toward the interior of the chamber to approximately a 90° angle and out toward the center of the chamber.
- Install the shelf support into the new location by inserting the top of the support into the new position and rotating down toward the bottom of the cabinet until the bottom tab locks in.
- Count the empty holes in the pilaster at each of the corners to be sure that the shelf will be level in the new position.
- Reinstall the shelf with the raised edge toward the front of the cabinet.
- Align notches in bottom of the shelf with the shelf supports.
- Pull outward on shelf to insure it is locked properly on the supports.



3-1. Troubleshooting

If your unit is not operating properly, check the following before calling your authorized service agent.

Do not attempt to repair or service beyond this point. Contact SKYTRON for nearest authorized service agent.

TROUBLESHOOTING GUIDE	
DESCRIPTION	ACTION REQUIRED
ER - Memory Error	Controller Defective, Replace - Contact SKYTRON representative
--- Short Circuit Probe Error	Temperature Probe Defective, Replace - Contact SKYTRON representative
oo - Open Probe Error	Temperature Probe Defective, Replace - Contact SKYTRON representative
Unit Will Not Power Up	<ul style="list-style-type: none"> • Check Outlet for Power • Check if warmer is plugged into 120VAC outlet • Check if circuit breaker is turned on • Check if the power switch is turned on
Chamber does not Heat	<ul style="list-style-type: none"> • Is the power turned on • Is temperature set above Chamber Ambient Temperature • Is the Circulation Fan Operational • Is the Limit Thermostat reset
Over Temperature Alarm "A1" is Activated	<ul style="list-style-type: none"> • Is the Circulating Fan Operational • Are the Contents Loaded Properly • Has the Chamber Set Temperature been lowered

Only facility authorized, SKYTRON trained & certified, maintenance personnel should further troubleshoot or attempt repairs.

Troubleshooting or repairs by unauthorized personnel could result in personal injury or equipment damage.

3-2. Preventative Maintenance

a. Every 6 months - Cleaning

It is recommended to perform preventative maintenance on the Skytron model warming cabinets every six months or when any service is performed.

1. Turn off the power and unplug the warmer from the power source.
2. Using a damp cloth and mild non abrasive detergent rub surfaces in a back and forth motion in the direction of the grain, do not wipe in a circular motion or perpendicular to the grain.
 - Clean all exterior surfaces
 - Remove all contents and clean all shelving
 - Clean all interior chamber walls, floor and ceiling starting at the top and working down
3. Restore power to the warmer and allow temperatures to stabilize prior to reloading solutions and blankets.

b. Every year - Internal Cleaning

Removal of the interior plenum panels:

1. Remove the bottom spill pan with the four Phillips head retaining screws two in each side.
2. Remove the bottom plenum by removal of the four Phillips head screws at the front edge.
3. Supporting the ceiling panel remove the four Phillips head screws that hold the rear plenum to the ceiling plenum.
4. Support the ceiling plenum and pull the rear plenum at the bottom toward the front of the warmer to remove.
5. Remove the ceiling plenum by disconnecting the fan power wires.
6. Clean all exposed surfaces with a damp cloth and mild non abrasive detergent.
7. Assemble plenum panels in the reverse order of removal.
8. Plug the warmer in and turn the power on.

c. Yearly - Temperature Controller Calibration

1. Place an independent accurate thermometer in the chamber and close the door.
2. Set the temperature to a setting between 90° and 160°.
3. Allow chamber to acclimate to the selected temperature.
4. Compare controller reading with independent thermometer
5. Adjust controller program value **P1** up or down to correct any offset in readings. (see control settings section)

3-3. Limit Thermostat Reset

It may be necessary to reset the Limit Thermostat of a chamber due to a malfunction or a faulty controller. This is a safety cutout switch installed in each plenum area that is designed to interrupt power to the heating element if the temperature exceeds 180° F during operation. To reset the Limit Thermostat the following instructions should be followed.

a. For models SS2201-J2(G), SS2205-J2(G) and upper chamber of SS2207-J2(G):

1. Disconnect the power to the warmer by unplugging the unit.
2. Remove the top cover from the warming cabinet by removal of four Phillips head screws and place to the side.
3. The Limit Thermostat is located at the rear center of the cabinet.
4. Press firmly on the center red button until an audible snap is heard.
5. Replace the top cover and install the fastening screws.
6. Plug the warmer back into a power source.
7. Monitor the warmer for normal operation.

b. For lower chamber of SS2207-J2(G):

1. Disconnect the power to the warmer by unplugging the unit.
2. Remove the fan assembly from the ceiling plenum by removal of four Phillips head screws and unplug the power cord and place to the side.
3. The Limit Thermostat is located at the rear center of the cabinet.
4. Press firmly on the center red button until an audible snap is heard.
5. Replace the fan assembly and install the fastening screws.
6. Plug the warmer back into a power source.
7. Monitor the warmer for normal operation.

3-4. Fan Replacement

Failure of a circulation fan can cause the warming chamber to overheat and enter an alarm mode. The following procedure should be followed to replace the circulation fan.

1. Disconnect the power to the warmer by unplugging the unit.
2. Remove the fan assembly from the ceiling plenum by removal of four Phillips head screws and unplug the power cord and place to the side.
3. Remove the four screws that secure the fan to the fan panel.
4. Install the new fan paying attention to the direction of flow; there are arrow markings on the fan to indicate flow. The fan should have the arrow pointing away from the fan mounting panel (UP).
5. Replace the fan assembly and install the fastening screws.
6. Plug the warmer back into a power source.
7. The fan should start to operate as soon as the power is turned on to the chamber repaired.

Note: It may be necessary to reset the Limit Thermostat if the chamber heated to a temperature greater than 180° F.

3-5. Heating Element and/or Temperature Probe Replacement:

The Heating Element and Temperature Probe are located in the heating plenum and positioned close to each other. The following procedure will allow for exchange of either or both parts.

1. Disconnect the power to the warmer by unplugging the power cord from the 120V outlet.
2. Removal of the interior plenum panels.
 - Remove the bottom spill pan with the four Phillips head retaining screws two in each side.
 - Remove the bottom plenum by removal of the four Phillips head screws at the front edge.
 - Supporting the ceiling panel remove the four Phillips head screws that hold the rear plenum to the ceiling plenum.
 - Support the ceiling plenum and pull the rear plenum at the bottom toward the front of the warmer to remove.
 - Remove the ceiling plenum by disconnecting the fan power wires.
3. The heating element is located on the rear wall.
 - Remove the electrical connections from the element.
 - Disconnect the heating element from the mounting location.
 - Install the new element and replace the electrical connections.
 - Proceed to step 5.
4. The temperature probe is located above the heating element and held in place with a hold down tab and secured with a Phillips head screw.
 - Loosen the Phillips head screw and slide the probe out from under the hold down tab.
 - Cut the wires off from the probe approximately 8" to 10" from the probe.
 - Strip the wires back and attach the new probe wires to the old probe.
 - Secure the new probe under the hold down tab and tighten the retaining screw.
 - Remove the front control panel from the warmer by removing the four Phillips head screws, one on each corner.
 - Pull the control panel out until all attached components are clear of the warmer body.
 - Roll the panel upward and place on top of the warming cabinet.
 - Find the Temperature probe wires previously cut and pull the new probe wires through the wire chase.
 - Remove the old probe wires from the controller and attach the new wires.
5. Reassemble the plenum panels.
 - Assemble plenum panels in the reverse order of removal in step 1.
 - Plug the warmer in and turn the power on.

Note: It may be necessary to calibrate the probe to the chamber by adjusting the offset in the controller, value **P1**. See Preventative Maintenance Section 2 on Calibration of the temperature controller to the chamber.

3-6. Door Adjustment/Orientation

a. The following procedure can be used to change the orientation of the door swing or to make adjustments to the latch alignment.

1. Disconnect the power to the warmer by unplugging the power cord from the 120v outlet.
2. Remove the front control panel from the warmer by removing the four Phillips head screws, one on each corner.
3. Pull the control panel out until all attached components are clear of the warmer body.
4. Roll the panel upward and place on top of the warming cabinet.
5. Remove the hinge pin from the top bracket while supporting the door.
6. Tilt the door out and lift off the lower hinge pin and set aside.
7. For dual compartment warmers remove the center hinge bracket while supporting the lower door.
8. Lift the door up and set to the side.
9. Remove the lower hinge bracket and secure to the opposite side of the warmer at the top and remove the hinge pin from the bracket.
10. Replace the hinge pin in the original top hinge bracket and remove from the cabinet and install at the opposite side lower position.
11. Remove the door latch keepers and mounting plate and secure to the opposite side of the cabinet. Removal/Replacement of the door Latch Pawl is recommended.
12. Rotate the door 180° and position on the lower hinge pin.
13. Install the center hinge bracket and secure to the cabinet if dual chamber.
14. Check for alignment of the latch keeper to the latch pawl. Adjust the keeper up or down to proper clearance. If the proper clearance cannot be achieved, washers (Skytron part number F1-010-93) or hinge bushings (Skytron part number F1-010-92) may be added to the lower hinge pin of the door to help raise the door to align with the keeper.

15. Install the upper door and install upper hinge pin. Follow step 14.
16. Replace the control panel using the 4 Phillips head screws previously removed.
17. Plug the warmer back into the power source.

b. Door latch adjustment

1. Slowly close the door and adjust the height of the keeper to provide between 1/8" to 1/16" clearance between the KEEPER and the LATCH PAWL. Mark the location, open the door and tighten the (2) screws. Test and readjust as required to insure proper operation.
2. If the proper clearance cannot be achieved with the available adjustment of the keeper to the latch pawl, it may be necessary to add additional washers to the bottom hinge pin of the door. (Follow Door Adjustment/Orientation procedure instructions.)

3-7. Temperature Controller

a. Replacement

If a fault is determined in the temperature controller and replacement is required follow the steps below to replace the controller. It may also require additional programming once the control has been changed.

1. Disconnect the power to the warmer by unplugging the power cord from the 120v outlet.
2. Remove the front control panel from the warmer by removing the four Phillips head screws, one on each corner.
3. Pull the control panel out until all attached components are clear of the warmer body.
4. Roll the panel upward and place on top of the warming cabinet.
5. Disconnect the heating element, power, and temperature sensor wires from the control.
6. Release the retaining ring that holds the control to the front panel.
7. Insert the new control and secure with retaining ring.
8. Connect the heating element, power, and temperature sensor wires to the new controller.
9. Secure the control panel to the warmer with the four Phillips head screws removed in step 2.
10. Plug the warming cabinet back into a 120volt power source.

b. Programming

Access to all code protected parameters.

1. Press SET for 8 seconds. The access code value 00 is shown on the display. (Unit comes with code set at 00 from factory).
2. With the UP and DOWN arrows, code can be set to user needs.
3. Press SET to enter the code. If code is correct, the first parameter label is shown on the display (SP).
4. Move to the desired parameter with the UP and DOWN keys.
5. Press SET to view the value on the display.
6. The value can be modified with the UP and DOWN arrows.
7. Press SET to enter the value and exit to next parameter.

8. Repeat until all necessary parameters are modified.
9. Press SET and DOWN at the same time to exit programming or wait one minute and the display will automatically exit programming mode.

Parameter	Description	Value
SP	Set point	User Defined
r0	Differential or Hysteresis	1
r1	Lower Value Set Point	90
r2	Higher Value Set Point	160
d0	Heating or Cooling Control	Ht
c0	Min. stop time for Load	0
c2	Load Status during Probe Error	off
P1	Ambient Probe Adjustment	-3
P5	Ambient Probe Type	TCJ or K *
H5	Parameter Access code	0
A0	Alarm 1 Hysteresis	10
A1	Alarm 1 Threshold	10
A2	Alarm 1 Exclusion Time	0
A3	Alarm 1 Configuration	HI
A4	Alarm 2 Hysteresis	1
A5	Alarm 2 Threshold	0
A6	Alarm 2 Exclusion Time	0
A7	Alarm 2 Configuration	off

* See page 21, item 16 for Thermocouple

3-8. Service

A regular program of preventive maintenance will increase the life of your equipment and keep it operating at peak performance.

Maintenance must be performed by authorized, trained maintenance personnel using SKYTRON authorized replacement parts and service techniques. Service instructions and parts are available from SKYTRON.

Preventive Maintenance contracts are available through your local SKYTRON representative.

The end of the useful life of the product is when the product can no longer be serviced to comply with IEC standards as determined by a SKYTRON authorized service representative.

Please contact your SKYTRON authorized representative for disposal of products or parts in accordance with current environmental regulations for medical products.

To obtain service instructions, replacement parts, factory service or preventive maintenance contracts, contact the SKYTRON representative listed below.

Or contact:

SKYTRON
5085 Corporate Exchange Blvd.
Grand Rapids, MI 49512
616-656-2900 FAX 616-656-2906
www.skytron.us

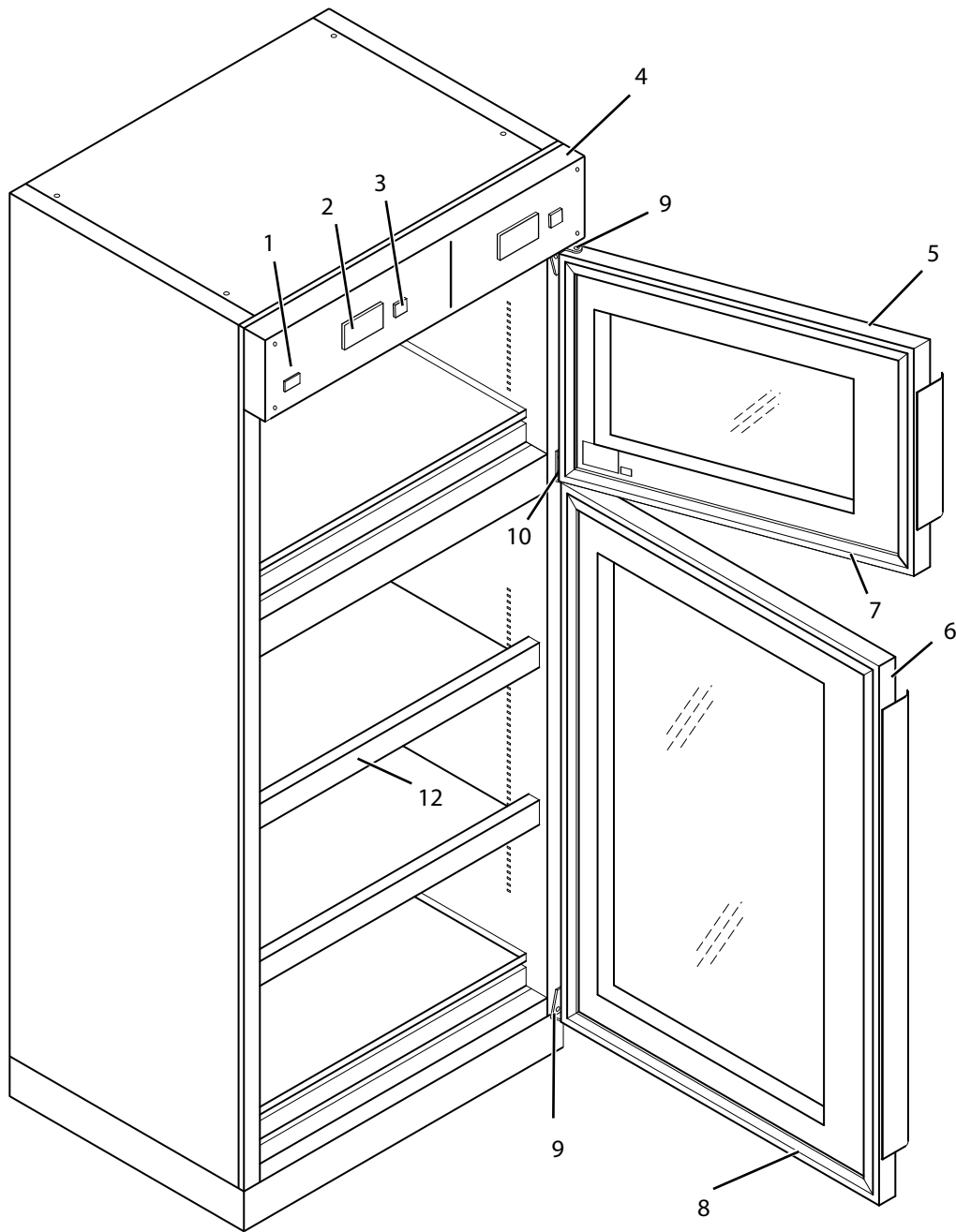
3-9. Maintenance Matrix

The specific items listed in the MAINTENANCE MATRIX shall be inspected and repaired or replaced as necessary. The suggested time intervals are intended as a guideline only and actual maintenance will vary by use and conditions. For optimal usage, safety and longevity of the product, have it serviced only by a SKYTRON authorized service representative using SKYTRON authorized replacement parts and service techniques.

Warming Cabinet Maintenance Matrix

Component	Inspection Interval
Air Circulation Fan	1 year
Heating Element	3 years
Temperature Controller	2 years
Thermocouple	5 years

SECTION IV REPLACEMENT PARTS



REPLACEMENT PARTS

Item	Part No.	Description	Qty.
1	40071	SWITCH, circuit breaker.....	1
2	16995-901	TEMPERATURE CONTROLLER, Fahrenheit (F)	A/R
--	16995-901-C	TEMPERATURE CONTROLLER, Celsius (C)	A/R
3	40072	SWITCH, power.....	A/R
4	F2-011-47	CONTROL PANEL, dual cabinet w/silk screen.....	1
--	F2-011-48	CONTROL PANEL, single cabinet w/silk screen	1
5	54300520	DOOR ASSEMBLY, SS2201-J2 & SS2207-J2 upper	1
6	54300524	DOOR ASSEMBLY, SS2207-J2 lower	1
--	54300602	DOOR ASSEMBLY, SS2205.....	1
--	F2-012-51	GLASS DOOR ASSEMBLY, SS2201-J2G & SS2207-J2G upper.....	1
--	F2-012-50	GLASS DOOR ASSEMBLY, SS2207-J2G lower	1
7	F1-010-24	GASKET, door, SS2201 & SS2207 upper	1
--	40095	GASKET, door, magnetic, SS2201-J2(G) & SS2207-J2(G) upper ***	1
8	F1-010-25	GASKET, door, SS2207 lower	1
--	40096	GASKET, door. magnetic SS2207-J2(G) lower ***	1
NS	F1-010-55	GASKET, door, SS2205.....	1
--	40097	GASKET, door, magnetic, SS2205-J2(G) ***	1
9	F1-010-79	HINGE KIT, universal, includes 2 hinges and 2 pins	1
10	F1-010-81	HINGE, center	1
NS	F1-010-92	BUSHING, door hinge, flanged stainless	A/R
NS	F1-010-93	WASHER, door hinge, stainless	A/R
12	F1-010-78	SHELF	A/R
NS	F1-010-39	CLIP, shelf support.....	A/R
	02400109	LEVELING FOOT, 1/2"-13 x 2-1/2"	4
	F1-010-32-2	LATCH KIT, includes male & female latch w/screws	A/R
	F2-010-89	LATCH, machined aluminum, male end only.....	A/R
	F2-010-56-1	LATCH MOUNTING PLATE KIT, includes plate & screws.....	A/R
13*	00300027	POWER CORD.....	1
14*	40078	FAN.....	A/R
15*	40077	STRIP HEATER.....	A/R
	F2-010-72	HEATER, tubular, 3000W, 240V for 2205 & 2207 lower comp.**	A/R
	F2-010-73	HEATER, tubular, 1000W, 240V for 2201 & 2207 upper comp. **	A/R
16*	16995-904-1	THERMOCOUPLE, type J, brown outer sheath, white (+) red (-)	A/R
17*	40086	LIMIT THERMOSTAT -180° F (not included on early models)	A/R
NS	00300066	WIRE, black	/FT
NS	00300067	WIRE, white	/FT
NS	F2-012-81	LABEL, Operation.....	A/R
NS	F2-012-82	LABEL, Hot Surface	A/R

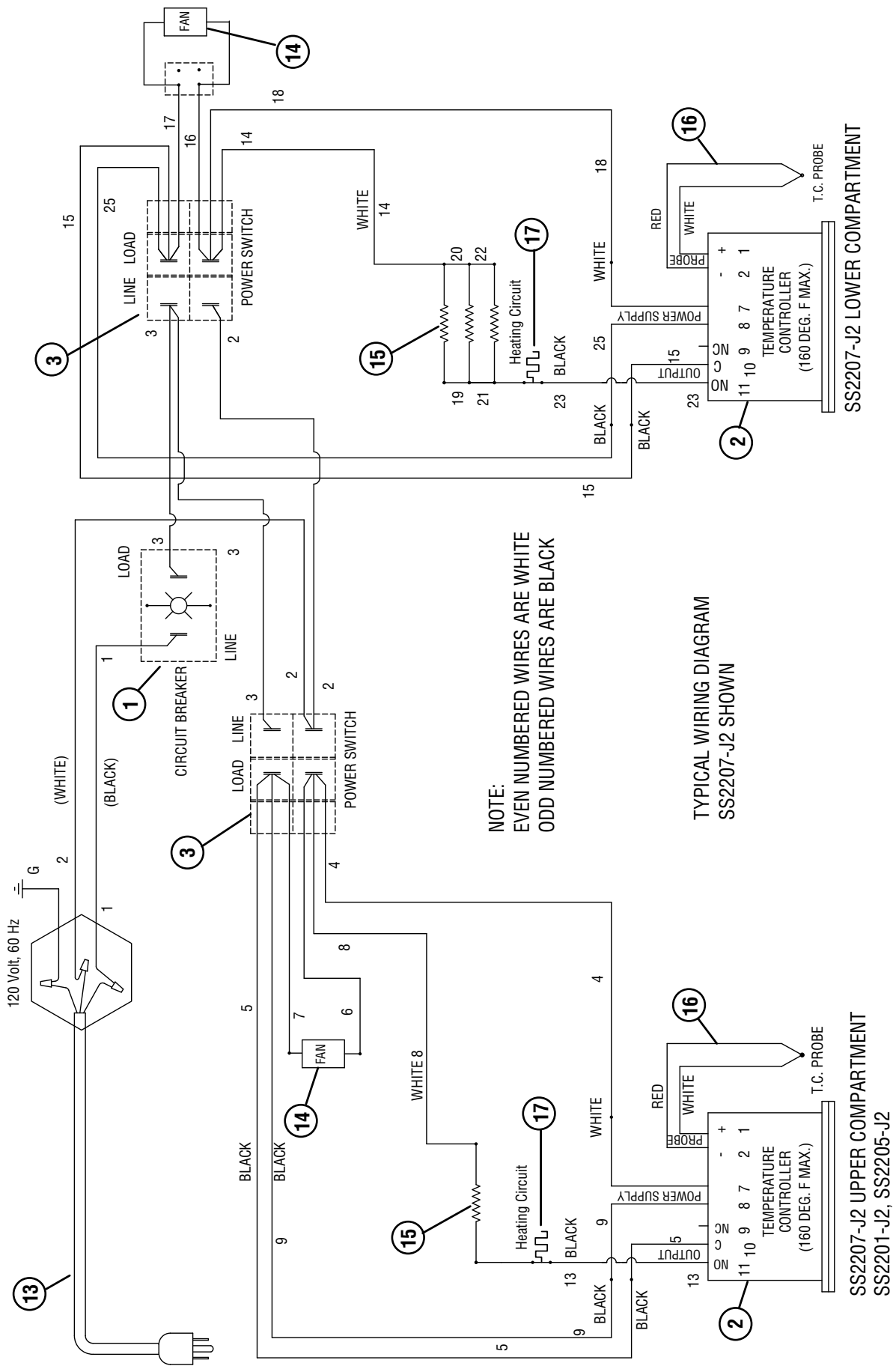
* Shown on wiring diagram (pg. 22)

** S.N. 010801 & Later (Jan. 08 & Later)

*** S.N. ending with "M"

Parts replaced with other than SKYTRON authorized components may cause damage to the equipment and / or contents.

WIRING DIAGRAM



DAMAGED SHIPMENT CLAIM PROCEDURE

Whenever a shipment suffers damage while in the custody of the transportation company, the responsibility lies with the transportation company, and the value of the damages can be collected from the transportation company if the proper procedures are followed.

When a shipment is received in a damaged condition and due to the appearance of the containers such as a broken crate, torn wrapping, or smashed carton, the contents may have been damaged. That fact should be noted on the Bill of Lading offered by the transportation company. An example of an applicable statement would be; "Received in good order except as noted" or "Crate damaged, possibility of concealed damage." The addition of these types of statements on the shipping documents will automatically give grounds for starting a claim.

If damage cannot be identified on the exterior of the container, but is found when the container is opened, further unpacking should be stopped immediately and the container with all wrapping or packing materials should be held. The transportation company should be notified so an inspector can be sent. Failure to follow either of these two procedures may result in an inability to file a claim and collect for damage done. Returning the container to the sender without such an inspection may prevent filing a claim, because it will divide the responsibility for damage and in many cases the transportation company will return the shipment to the sender without charge after the inspection.

The claim itself may be filed by either the shipper or consignee, but the consignee must notify the transportation company and the shipper that the damage has occurred. Remember that refusal of the shipment or failure to note the possibility of damage on the shipping documents may jeopardize the claim. Also, acceptance of a damaged shipment which has been processed properly to allow for filing a claim, will not jeopardize the position of the consignee. In any case, SKYTRON will see that damage which is not the fault of the consignee or his agents is corrected, if the transportation company does not honor the claim, as long as SKYTRON receives the full cooperation of the consignee in filing the claim.

Some of the papers needed for filing a claim are in the hands of the consignee after the shipment has been received. If SKYTRON must file a claim, we will request these papers by name from the consignee at such time as the claim is under discussion. We will require the originals of these papers and not copies.

Knowledge of the procedures outlined above and your cooperation in submitting damaged shipment claims will help both you, our customer, and SKYTRON by assuring the integrity of our products from manufacturing to installation.



5085 Corporate Exchange Blvd. S.E.
Grand Rapids, MI 49512 • 1.616.656.2900 • FAX 1.616.656.2906